



STIC Search Report

EIC 1700

STIC Database Tracking Number: 1744832

TO: Eisa Elhilo
Location: REM 9A60
Art Unit : 1751
December 27, 2005

Case Serial Number: 10/501833

From: Mei Huang
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-3952
Mei.huang@uspto.gov

Search Notes

Examiner Elhilo,

- Only one answer, applicant's work, was retrieved when the structure hit was combined with "hair? ..." or "cosmetic/rl". See page 4-6;
- 24 answers were retrieved when the structure hit was combined with "color? ..or dye? ..." and "fiber? .. or textile#". See page 8-30.

If you have any questions or if you would like to refine the search query, please feel free to contact me.

Thank you for using STIC services!

Mei Huang





STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:* Example: 1713
➤ *Relevant prior art found, search results used as follows:*

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

Comments:

=> d his ful

(FILE 'HOME' ENTERED AT 09:29:43 ON 27 DEC 2005)

FILE 'HCAPLUS' ENTERED AT 09:29:50 ON 27 DEC 2005

E US20050155160/PN

L1 1 SEA US2005155160/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 09:31:14 ON 27 DEC 2005

L2 70 SEA (4363-03-5/BI OR 18062-89-0/BI OR 3900-89-8/BI OR

L3 70 SEA L2 AND C6/ES

D SCAN

L4 STR

L5 1 SEA SSS SAM L4

L6 STR L4

L7 35 SEA SSS SAM L6

DIS

D L7 QUE STAT

L8 1101 SEA SSS FUL L6
SAV L8 ELALIO833/A

L9 STR L6

L10 17 SEA SUB=L8 SSS SAM L9

L11 665 SEA SUB=L8 SSS FUL L9

SAV L11 ELALIO833S/A

L12 110 SEA L11 NOT PMS/CI

L13 65 SEA L2 AND L12

FILE 'HCAPLUS' ENTERED AT 10:30:13 ON 27 DEC 2005

L14 252 SEA L12

L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR
PAINT?

L16 QUE KERATIN? OR HAIR? OR SCALP?

D HSI

L17 91 SEA L14 AND L15

L18 1 SEA L17 AND L16

L19 QUE FIBER? OR FABRIC? OR FIBR? OR TEXTILE#

D SCA L18

L20 24 SEA L17 AND L19

L21 1 SEA L14 AND (L16 OR SHAMPOO?)

L22 0 SEA L14 AND COSMETIC#/SC, SX

L23 1 SEA L14 AND COS/RL

L24 1 SEA L1 AND L18 OR L21 OR L23

L25 25 SEA L24 OR L20

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 27 Dec 2005 VOL 144 ISS 1
FILE LAST UPDATED: 26 Dec 2005 (20051226/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 DEC 2005 HIGHEST RN 870675-00-6
DICTIONARY FILE UPDATES: 26 DEC 2005 HIGHEST RN 870675-00-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from
* the IDE default display format and the ED field has been added,
* effective March 20, 2005. A new display format, IDERL, is now
* available and contains the CA role and document type information.
*

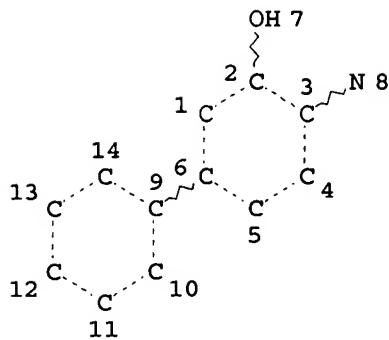
Structure search iteration limits have been increased. See HELP SLI for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 23, 2005 (20051223/UP).

=> d que stat 124
L1 1 SEA FILE=HCAPLUS US2005155160/PN
L6 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

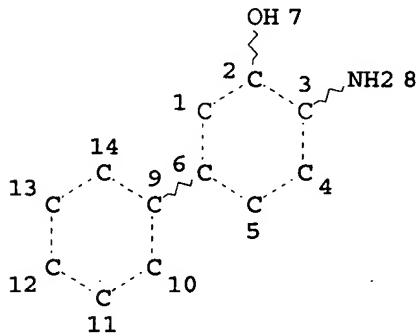
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L8 1101 SEA FILE=REGISTRY SSS FUL L6
L9 STR

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L11 665 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L12 110 SEA FILE=REGISTRY L11 NOT PMS/CI
L14 252 SEA FILE=HCAPLUS L12
L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR P
AINT?
L16 QUE KERATIN? OR HAIR? OR SCALP?
L17 91 SEA FILE=HCAPLUS L14 AND L15

L18 1 SEA FILE=HCAPLUS L17 AND L16
 L21 1 SEA FILE=HCAPLUS L14 AND (L16 OR SHAMPOO?)
 L23 1 SEA FILE=HCAPLUS L14 AND COS/RL
 L24 1 SEA FILE=HCAPLUS L1 AND L18 OR L21 OR L23>

=> d 124 ibib abs fhitstr ind

L24 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:408222 HCAPLUS
 DOCUMENT NUMBER: 140:412286
 TITLE: Synthesis of 4-Amino-biphenyl-3-ol derivatives
 and use as hair dyes
 INVENTOR(S): Chassot, Laurent; Braun, Hans-Juergen
 PATENT ASSIGNEE(S): Wella A.-G., Germany
 SOURCE: Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10251106	A1	20040519	DE 2002-10251106	200211 02
WO 2004041226	A1	20040521	WO 2003-EP4960	200305 13
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
BR 2003006686	A	20041207	BR 2003-6686	200305 13
US 2005155160	A1	20050721	US 2003-501833	200305 13
EP 1562539	A1	20050817	EP 2003-725188	200305 13
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.:

DE 2002-10251106 A

200211
02

WO 2003-EP4960 W

200305
13

OTHER SOURCE(S): MARPAT 140:412286

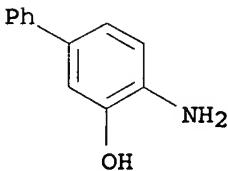
AB The invention concerns the synthesis of 4-Amino-biphenyl-3-ol derivs. and their use as **hair dyes**. The **hair dyes** further contain direct **dyes**, coupling and developing agents. Thus 4-amino-1,1'-biphenyl-3-ol was prep'd. starting from 3-chloro-2-hydroxy-nitrobenzene and reacting with sodium hydride in acetone; the obtained 4-chloro-2-(ethoxymethoxy)-1-nitrobenzene was reacted with phenylboric acid, and then with 2-(dicyclohexylphosphino)-biphenyl and tripotassium phosphate in the presence of palladium acetate. 0.30 G 4-amino-1,1'-biphenyl-3-ol was used in a **hair dye** compn. that further contained (g): 4-amino-2-aminomethyl-phenol dihydrochloride 0.55; 2-methyl-1,3-dihydroxy benzene 0.22; 1-naphthol 0.30; potassium oleate (8% aq. soln.) 10; ammonia (22% aq. soln.) 10; ethanol 10.0; ascorbic acid 0.3; water to 100.

IT 4363-03-5D, derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES
(Uses)(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
hair dyes)

RN 4363-03-5 HCAPLUS

CN [1,1'-Biphenyl]-3-ol, 4-amino- (9CI) (CA INDEX NAME)



IC ICM C07C215-76

ICS A61K007-13

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 25

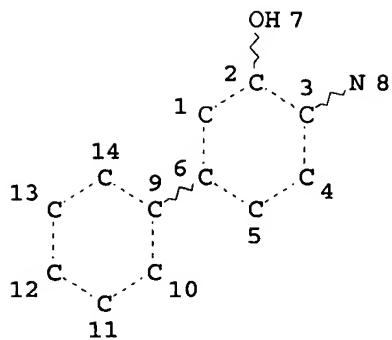
ST amino biphenyl derivative **hair dye**IT **Dyes**(direct; synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
hair dyes)IT **Hair preparations**(dyes, oxidative; synthesis of 4-Amino-biphenyl-3-ol
derivs. and use as **hair dyes**)IT **Hair preparations**(dyes; synthesis of 4-Amino-biphenyl-3-ol derivs. and
use as **hair dyes**)

IT pH

(synthesis of 4-Amino-biphenyl-3-ol derivs. and use as

hair dyes)
 IT 4363-03-5D, derivs. 688746-23-8
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 688746-27-2 688746-28-3 688746-29-4
 688746-30-7 688746-31-8 688746-32-9
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 688746-82-9 688746-83-0 688746-84-1
 688746-85-2 688746-86-3
 RL: COS (Cosmetic use); BIOL (Biological study); USES
 (Uses)
 (synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
 hair dyes)
 IT 4363-03-5P 688746-21-6P
 RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic
 preparation); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
 hair dyes)
 IT 18062-89-0P 688746-20-5P 688746-22-7P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
 hair dyes)
 IT 611-07-4 3900-89-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis of 4-Amino-biphenyl-3-ol derivs. and use as
 hair dyes)

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 L6 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

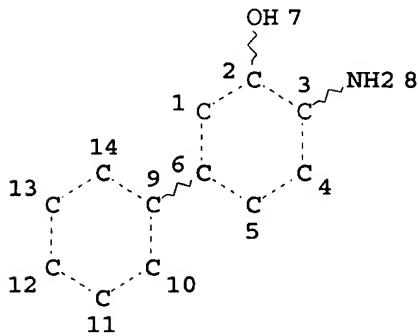
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L8 1101 SEA FILE=REGISTRY SSS FUL L6
L9 STR

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L11 665 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L12 110 SEA FILE=REGISTRY L11 NOT PMS/CI
L14 252 SEA FILE=HCAPLUS L12
L15 QUE COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR PAINT?
L17 91 SEA FILE=HCAPLUS L14 AND L15
L19 QUE FIBER? OR FABRIC? OR FIBR? OR TEXTILE#

L20

24 SEA FILE=HCAPLUS L17 AND L19

=> d 120 ibib abs fhitstr 1-
 YOU HAVE REQUESTED DATA FROM 24 ANSWERS - CONTINUE? Y/ (N) :y

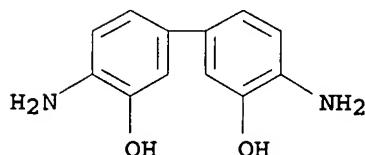
L20 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1957:74446 HCAPLUS
 DOCUMENT NUMBER: 51:74446
 ORIGINAL REFERENCE NO.: 51:13404d-i
 TITLE: Chromium- and cobalt-containing azo dyes
 of the 1-phenyl-azo-2-hydroxy-3-
 naphthalenecarboxylic acid series
 PATENT ASSIGNEE(S): Sandoz Ltd.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 772019		19570410	GB	
DE 1053693			DE	

AB Metalliferous dyes for wool, silk, leather, and synthetic polyamide fibers are prep'd. Their metal-free compds. have the general formula 1,2,3-(XRN:N)(HO)C10H5CONR'R'', where R' is H, lower alkyl, hydroxyalkyl, alkoxyalkyl, aralkyl, cycloalkyl or phenyl; R'' is H, lower alkyl or together with R' and a tertiary N is a heterocyclic amine; X is ortho to the azo group and is capable of metal complexing; R is a phenylene radical which may carry a N-substituted SO2NH2 group or an alkylsulfonyl group. They are prep'd. by coupling 1 mole of the diazo compd. of a substituted PhNH2 with 1 mole of a 2-hydroxy-3-naphthalenecarboxamide. Thus, 20.2 parts of 3-amino-4-hydroxy-N-methylbenzenesulfonamide (I) is diazotized, coupled at 0-5° with 20.1 parts 2-hydroxy-N-methyl-3-naphthalenecarboxamide (II) in 150 H2O contg. 5 NaOH and 5 Na2CO3; the dye is pptd. with NaCl as a dark powder. This monoazo dye 41.4 parts in 1000 H2O with 3 NaOH are treated for 30 min. at 60° with 14.2 CoSO4, 5.6 NaOH, and 125 aq. 3% tartaric acid soln., pptd. with NaCl, filtered, dried, and ground to give a dark powder which gives Bordeaux-red shades of good light-fastness. The Cr dye gives violet shades. Replacement of I by 2-amino-1-hydroxy-4-chlorobenzene-5-sulfonamide and reaction with II gives a violet Co dye, a blue Cr dye. Diazotized 4-amino-3-hydroxybenzenesulfonamide (III) and 2-hydroxynaphthalene-3-(N-phenyl)carboxamide (IV) give a violet Co-complex, a blue Cr complex dye. Diazotized 3-amino-4-hydroxy-N-(4-methoxyphenyl)benzenesulfonamide and 2-hydroxy-3-naphthalenecarboxamide (V) give a clear Bordeaux-red Co dye, a brownish violet Cr dye. Diazotized 4-amino-3-hydroxy-N-(2-methoxyphenyl)benzenesulfonamide and V give a violet Co dye, a violet-blue Cr dye. The metal free dye from III and IV treated with the azo dye obtained from diazotized 2-amino-4-chlorophenol (VI) and

1-acetamido-7-hydroxynaphthalene gives a blue Cr **dye** when treated with NH₄Cr(SO₄)₂ and HCONH₂. The **dye** from diazotized 3-amino-4-hydroxy-N-(2-methylphenyl)-benzenesulfonamide and V treated with the monoazo **dye** from diazotized VI with 2-naphthol, then with CoSO₄ gives a clear Bordeaux-red **dye**

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(azo **dyes** from)
RN 2373-98-0 HCAPLUS
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1950:39498 HCAPLUS

DOCUMENT NUMBER: 44:39498

ORIGINAL REFERENCE NO.: 44:7547i,7548a-f

TITLE: Copper-containing azo **dyes**

PATENT ASSIGNEE(S): Sandoz Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 633206 19491212 GB

GI For diagram(s), see printed CA Issue.

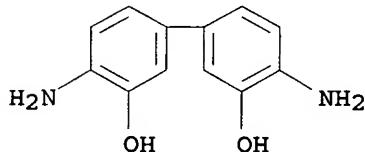
AB Copper-contg. azo **dyes** are prep'd. by coupling 1 mol. of a tetrazotized 3,3'-dialkoxybenzidine with 1 mol. of a naphtholsulfonic acid and 1 mol. of an azine of the formula (Ia), where -C:C- is a portion of an aryl residue. The **dyes** are treated with copper-yielding materials in substance or on the fiber. 3,3'-Dimethoxybenzidine (I) 24.4 is tetrazotized and coupled with 1-naphthol-4,8-disulfonic acid 30.4 in the presence of Na₂CO₃; an alk. soln. of the Na salt from 4-hydroxybenzo[a]phenazine-2-sulfonic acid (II) 32.6 is added. To facilitate the coupling 5-10% of a mixt. of pyridine bases may be added. The resulting **dye** is reddish blue in H₂O and gray-blue in H₂SO₄. A soln. 500 contg. cryst. CuSO₄ 50 and concd. aq. NH₃ 85 parts is added gradually at 80-90° to a soln. of the above **dye** 96.2 and Na₂CO₃ 20 in H₂O 3000 parts; the mixt. is stirred at 90° for 5 hrs. and then refluxed for 18 hrs. The copper complex is isolated, filtered, and dried; it **dyes** cotton and regenerated cellulose in blue-gray shades of very good fastness to light and to washing. In a similar fashion copperable **dyes** were prepared by coupling tetrazotized I, on the one

hand with 1-naphthol-3,6 (or 3,8)-disulfonic acid, 3-naphthol-3,6-disulfonic acid, 1-naphthol-3,6,8-trisulfonic acid, and 1,8-naphthalenediol-3,6-disulfonic acid, and on the other hand with II, the 10-methoxy-, 10-methyl-, and 10-carboxy- derivatives of II, 4,10-dihydroxy-2-sulfobenzo[a]phenazine-9(or 11)-carboxylic acid, 12-hydroxytribenzo[a,c,h]phenazine-14-sulfonic acid, 4,11-dihydroxydibenzo[a,h]phenazine-2,9-disulfonic acid, and 1,10-dihydroxydibenzo[a,j]phenazine-3,12-disulfonic acid. The phenazines were prep'd. by the procedures given in French 679,164 (C.A. 24, 3909) and Brit. 318,839 (C.A. 24, 2610) and by condensing 1,2-diamino-5-naphthol-7-sulfonic acid with ortho diketones. The dyes, after coppering, color cotton in greenish blue to blue-gray to greenish blue-gray shades.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1950:39492 HCAPLUS
 DOCUMENT NUMBER: 44:39492
 ORIGINAL REFERENCE NO.: 44:7547c-f
 TITLE: Metallizable azo dyes
 PATENT ASSIGNEE(S): C I B A Ltd.
 SOURCE: Addn. to Swiss 253,712 (C.A. 44, 6135i)
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CH 259325

19490606 CH

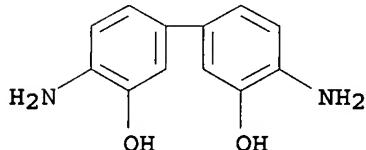
AB The disazo dye (I) prep'd. by coupling diazotized 5-(4-amino-2-sulfophenylazo)salicylic acid (II) (from 33.7 parts of the amine) with 2,4-(H2N)MeC6H3OMe (III) and the disazo dye prep'd. by coupling diazotized II (from 33.7 parts of the amine) with m-MeC5H4NH2 are treated together at 40-50° in H2O (weakly alk.) 10,000 parts with COCl2 until no primary amine remains. The product, a brown powder, dyes vegetable fibers wash-fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,326, I is treated with COCl2 to give a red-brown dye, which colors vegetable fibers fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,327, the disazo

dye prep'd. by coupling 5-(4-amino-3-sulfophenylazo)salicylic acid with III is treated with COCl₂ to give a red-brown dye, which dyes vegetable fibers fast red shades by the one- or two-bath after-coppering procedures. In Swiss 259,328, the disazo dye prep'd. by coupling diazotized II with PhNH₂ is treated with COCl₂ to give a brown dye, which colors vegetable fibers wash-fast red-orange shades by the one- or two-bath after-coppering procedures. In Swiss 259,329, the disazo dye prep'd. by coupling diazotized 5-(4-amino-2-sulfophenylazo)-2,3-cresotic acid with III is treated with COCl₂ to give a brown dye, which colors vegetable fibers fast bluish red shades by the one- or two-bath after-coppering procedures.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 4 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:53010 HCPLUS

DOCUMENT NUMBER: 43:53010

ORIGINAL REFERENCE NO.: 43:9464f-i, 9465a

TITLE: Asymmetrical polyazo dyes

INVENTOR(S): Mayer, Hans; Widmer, Willy

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2476261	19490712	US
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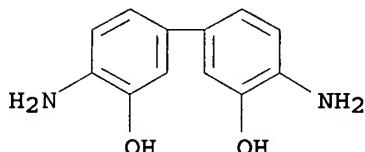
AB Asymmetrical polyazo dyes may be prep'd. by coupling the disazo compd. formed from 1 mol tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl and 1 mol. of a coupling component contg. a sulfonic acid group, in the presence of at least 25% pyridine, with a coupling component free from sulfonic acid groups. The coupling component used to form the disazo starting compd. may be a 1-(sulfoaryl)-3-methyl-5-pyrazolone, e.g., 1-(4,8-disulfo-2-naphthyl)-3-methyl-5-pyrazolone, or a hydroxynaphthalene sulfonic acid free from other substituents and capable of coupling in a position vicinal to the OH group, such as 1,3-, 1,4-, 1,5-, 2,4-, 2,5-, 2,6-, or 2,7-hydroxynaphthalenesulfonic acid, or 2-amino-5-hydroxy-7-naphthalenesulfonic acid. The coupling

component free from sulfonic acid may be barbituric acid, 2,4-dihydroxyquinoline, 6,8-dihydroxyquinoline, or any similar group capable of coupling in a position vicinal to an OH group. The new dyes are suitable for coloring cotton, linen, and regenerated cellulose, and may be converted in substance, in the dyebath, or on the fiber, into complex metal compounds. Thus 2-hydroxynaphthalene is coupled in the presence of at least 25% pyridine with the compound formed by coupling 1 mol. tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl with 1 mol. 2-hydroxy-6-naphthalenesulfonic acid. The new dye, violet in water and blue in caustic soda soln., colors cellulose fibers wash- and lightfast violet tints by the single-bath or two-bath after-coppering process. Similar methods are described for the prepn. of navy blue, violet-black, violet, reddish blue and blue-violet dyes.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:53002 HCAPLUS

DOCUMENT NUMBER: 43:53002

ORIGINAL REFERENCE NO.: 43:9462i

TITLE: Disazo dye

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale.

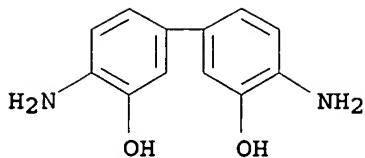
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

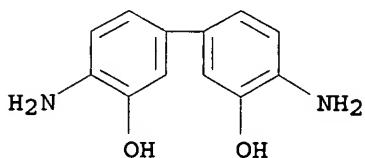
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AB	CH 233084	-----	-----	19440916	CH
AB	Addn. of 30 parts by vol. 30% NaOH to 1-(p-2-hydroxyethylphenyl)-3-methyl-5-pyrazolone 9.36 and Na2CO3 20, in H2O 200 parts, coupling with I at 10-15°, neutralization after 24 hrs. at room temp. with HCl, and salting out gave the disazo dye, a dark powder dyeing animal fibers a wash-and light-fast Bordeaux-red shade after several Cu aftertreatments.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)				



L20 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1949:53001 HCAPLUS
 DOCUMENT NUMBER: 43:53001
 ORIGINAL REFERENCE NO.: 43:9462g-i
 TITLE: Disazo dye
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale.
 SOURCE: Addn. to Swiss 229,184 (C.A. 43, 7699i)
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 233083	-----	19440916	CH	-----
AB	Addn. of NaNO ₂ 2.76 parts in H ₂ O to 3,3'-dihydroxy-4,4'-diaminobiphenyl 4.32 and 30% HCl 10, in H ₂ O 200 parts, gave the tetrazotized product (I). NaOH (30%) 11 parts by vol. was added to 1-phenyl-3-methyl-5-pyrazolone 7.83 and Na ₂ CO ₃ 5, in H ₂ O 200 parts. I was coupled with this mixt. at 10-15°, and allowed to stand 24 hrs. at room temp. Addn. of 20 parts by vol. 30% NaOH, 6 hrs. stirring, and addn. of 18 parts by vol. of 30% HCl and NaCl ptd. the disazo dye, a gray-black powder, coloring cellulose fibers a fast ruby-red tint with several Cu aftertreatments.			
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)			
RN	2373-98-0 HCAPLUS			
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1949:45316 HCAPLUS
 DOCUMENT NUMBER: 43:45316
 ORIGINAL REFERENCE NO.: 43:8157a-i
 TITLE: Disazo dye from dihydroxybenzidine

INVENTOR(S): Mayer, Hans; Widmer, Willy

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2476259 19490712 US

GI For diagram(s), see printed CA Issue.

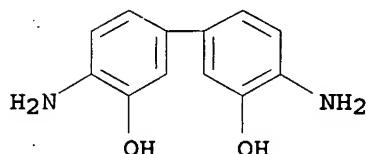
AB New disazo dyes for cellulose, cotton, rayon, and animal fibers may be prep'd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) with two coupling components stepwise, the first coupling being performed in a medium having a pH ranging from that of an AcOH medium to a medium rendered alk. with an alkali carbonate, and the second coupling taking place in a reaction medium with a higher pH value. The new dyes obtained have the general formula (II) in which R and R' represent the residues of two different coupling components, the first of which contains a group imparting solv., such as a sulfonic acid group, and the second of which is free from groups imparting solv. both coupling components must be capable of coupling in the ortho position to the OH groups. When the dye mol. contains metallizable groups, the dye may be converted in the dyebath or on the fiber by treatment with Cu sources, etc. Thus, 21.6 parts by wt. of I are tetrazotized and coupled in a neutral medium with 25.4 parts 1-(3-sulfophenyl)-3-methyl-5-pyrazolone. A soln. of 18.5 parts acetoacetanilide in 80 parts water and 14 parts caustic soda soln. (30%) is added and stirred until coupling is complete. The new dye is brownish red in water and bluish red in caustic soda soln., and dyes cellulose fibers from a neutral or weakly alk. bath brownish red tints, becoming a fast brownish blue-red upon treatment with Cu salts. Tetrazotized I coupled first with 1-(4-sulfophenyl)-3-methyl-5-pyrazolone, and then with 3-methyl-5-pyrazolone, forms a new dye, blue-red in water, which dyes cellulose fibers from a neutral or weakly alk. bath blue-red tints which become bluish Bordeaux light- and wash-fast tints upon treatment with Cu salts. Tetrazotized I, 1-(4-chloro-3-carboxyphenyl)-3-methyl-5-pyrazolone, and 1-phenyl-3-methyl-5-pyrazolone gives a black-brown powder which dyes cellulose brownish blue-red tints. Tetraazotized I, 1-(4-sulfophenyl)-3-methyl-5-pyrazolone, and barbituric acid gives a dye which imparts red-brown color to cellulose fiber. Tetrazotized I, 2-naphthol-6-sulfonic acid (III) and 2-naphthol dyes cellulose violet tints. Instead of III 2-naphthol-4(or 7)sulfonic acid or 1-naphthol-4(or 5)sulfonic acid may be used to obtain more bluish shades. I tetrazotized and coupled with 6-amino-1-naphthol-3-sulfonic acid (IV) and 2-naphthol gives a blue-black powder which dyes cellulose fibers blue which on coppering become red-blue. In place of IV 7-amino-1-naphthol-3-sulfonic acid will react to give a dull blue while 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonic acid gives clear blue-green tints. From tetrazotized I, IV, and

2,6-naphthalenediol, 6-methoxy-2-naphthol, or 5,8-dichloro-1-naphthol similar **dyestuffs** are obtained. If 1-(8-sulfonaphthyl)-3-methyl-5-pyrazolone is used a violet dye for cellulose is obtained. Tetrazotized I, 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonic acid and 1-phenyl-3-methyl-5-pyrazolone gave a violet dye for cellulose. After coppering they became blue-violet. I, 2-naphthol-7-sulfonic acid, and IV give a blue dye for cellulose. In place of IV 6-anilino- or 6-(2-hydroxyethylamino)-1-naphthol-3-sulfonic acid gives greenish tints. Instead of 2-naphthol-7-sulfonic acid, 1-naphthol-4-sulfonic acid gives a similar dye; 1-naphthol-5-sulfonic acid gives a dull red-blue whereas 1-naphthol-3-sulfonic acid gives green-blue shades. Tetrazotized I, 3-methyl-5-pyrazolone, and 2,8-naphthalenediol-6-sulfonic acid give violet tints on cellulose.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:45313 HCAPLUS

DOCUMENT NUMBER: 43:45313

ORIGINAL REFERENCE NO.: 43:8155i,8156a-c

TITLE: Disazo dyes

INVENTOR(S): Mayer, Hans; Widmer, Willy

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2476260 19490712 US

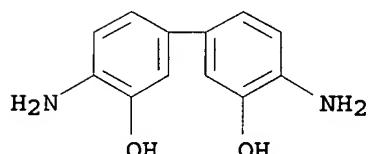
AB Sulfo-free disazo dyes may be prep'd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) in the presence of a considerable amt. of pyridine with a naphthol capable of coupling in a position vicinal to an OH group. Asymmetric disazo dyes may be formed by coupling 1 mol. I with 1 mol. each of 2 different naphthols, while symmetrical dyes may be formed by coupling 1 mol. I with 2 mols. of an appropriate naphthol. These dyes are suitable for coloring linen, cotton, and regenerated cellulose, and may be converted in substance, in the bath, or on the fiber into metal compds.

by treatment with Cu, Fe, Ni, or Co salts. Thus, 21.6 parts by wt. of I are tetrazotized and coupled with 33 parts 2,6-dihydroxynaphthalene (II) to form a dark blue powder, greenish blue in dil. caustic soda, for **coloring cellulose fibers** wash- and light-fast navy blue tints by the single-bath or two-bath after-coppering process. The tetrazo compd. obtained from 21.6 parts I is coupled in an alk. medium in the presence of pyridine with 46 parts 2-hydroxy-6-naphthalenesulfonamide (III), to form a **dye** violet in water and blue in caustic soda soln., which **colors cellulose fibers** wash- and light-fast blue-violet tints by the single-bath or two-bath after-coppering process. Other **dyes** were prep'd. from I and 1,5, 2,3, 2,6, and 2,7 derivs. of II or from 1,4, 1,5, 1,8, 2,5, and 2,7 derivs. of III or with 2-(HO)C₁₀H₆CH₂CH₂OH.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:42686 HCAPLUS

DOCUMENT NUMBER: 43:42686

ORIGINAL REFERENCE NO.: 43:7700f-g

TITLE: Disazo dye

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

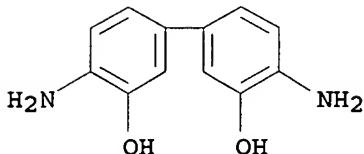
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 231843	-----	19440717	CH	-----

AB 3,3'-Dihydroxybenzidine (4.32 parts) is tetrazotized with NaNO₂ and HCl, then coupled with 1-(3'-nitrophenyl)-3-methyl-5-pyrazolone 11, 30% NaOH 10 (vol. parts) and Na₂CO₃ 5 in H₂O 200 1 hr. at 10-12°, then 24 hrs. at 18-20°; addn. of HCl ppts. the disazo dye, a green bronze powder, red-orange in dil. alkali, bluish red in concd. H₂SO₄, and **dyeing** cotton and other cellulose **fibers**, after 1 or 2 aftertreatments with Cu, a wash- and light-fast Bordeaux-red.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:42685 HCAPLUS

DOCUMENT NUMBER: 43:42685

ORIGINAL REFERENCE NO.: 43:7699i,7700a-f

TITLE: Disazo cotton dyes

PATENT ASSIGNEE(S): Soc. pour l'ind chim. a Bale

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

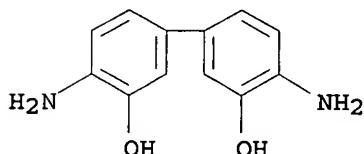
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
CH 232503		19440816	CH	
AB	Addns. to Swiss 229,184 (cf. preceding abstr.). Tetrazotized 3,3'-dihydroxybenzidine (I) 4.32 is coupled with a soln. of 1-(4'-hydroxy-3-carboxyphenyl)-3-methyl-5-pyrazolone 9.4 in Na ₂ CO ₃ 100 and H ₂ O 100 parts. The temp. of coupling is 10-12° for the first 2 hrs. and then 35-40° for 40-50 hrs. The finished dye is isolated by filtration. A light-fast wine-red shade is obtained on cotton with the coppered dye. In Swiss 232,504, tetrazotized I 4.32 is coupled with 1-(3-nitrophenyl)-3-methyl-5-pyrazolone 9.86 dissolved in H ₂ O 200, Na ₂ CO ₃ 5, and 11 parts by vol. of 30% NaOH soln. The coupling proceeds 24 hrs. at room temp. Then, 20 parts by vol. of NaOH soln. is added and stirred for 6 addnl. hrs. The dye is pptd. by neutralizing with HCl, salting, and filtering. After-coppering on cotton fiber gives fast wine-red shades. In Swiss 232,505, tetrazotized I 21.6 parts is coupled with 3-methyl-5-pyrazolone 19.6, with Na ₂ CO ₃ 44 in H ₂ O 400 parts as the medium. The coupling time is 20 hrs. at 10-25°. The dyeing properties are similar to the previous examples. In Swiss 232,506 tetrazotized I 21.6 parts is neutralized with Na ₂ CO ₃ 6.4 and coupled with di-Na 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonate 103 in H ₂ O 130 and KOH 30 parts. After 24 hrs. coupling at 10-15° the temp. is raised to 20-30° for completion. Other coupling media may be NH ₃ or NaOH. The aftercoppering dyeing method gives fast blue shades on cotton. In Swiss 232,507, I 10.8 parts is coupled as a tetrazo with 2-phenylamino-5-hydroxy-7-naphthalenesulfonic acid (II). The resulting coppered dye gives blue shades on cotton. In Swiss 232,508, tetrazotized I 10.8 parts is coupled in Ca(OH) ₂ 30, H ₂ O 200 with 2-(4-hydroxy-3-carboxyphenylamino)-5-hydroxynaphthalene-			

7-sulfonic acid 37.5 parts. After complete coupling, Na₂CO₃ is added to ppt. the CaCO₃. The dye is sepd. from the HCl-neutralized mother liquor by salting and filtering. The coppered dye is of blue shade on cotton. In Swiss 232,509, a similiar blue dye is obtained by coupling tetrazotized I 21.6 parts (in Ca(OH)₂ soln.) with 2-(2-hydroxyethylamino)-5-hydroxy-7-naphthalenesulfonic acid 58.5 parts. In Swiss 232,510, another similiar blue dye is obtained from tetrazotized I 10.8 parts with 1,8-dihydroxy-4-naphthalenesulfonic acid 12 in the presence of Ca(OH)₂ 20. After stirring 1 hr. at 5-8° and 1 hr. at 10-15°, a mixt. of II 15.8 and Ca(OH)₂ 9 in H₂O 100 parts is added. The coupling is stirred at 25-30° to completion. Isolation of the finished dye is similiar to the previous examples.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:42684 HCAPLUS

DOCUMENT NUMBER: 43:42684

ORIGINAL REFERENCE NO.: 43:7699h-i

TITLE: Disazo dye

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale

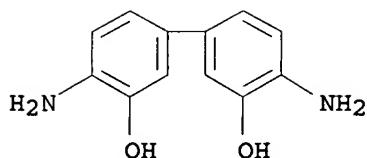
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	-----	-----	-----	-----
	CH 229184		19440103	CH	
AB	Tetrazotized-3,3'-dihydroxybenzidine 4.32 is coupled with 1-(3-sulfamylphenyl)3-methyl-5-pyrazolone 10.7 parts. The product dyes cotton and other cellulose fibers either by the single or two-bath coppering method, giving fast Bordeaux-red shades.				
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)				
RN	2373-98-0 HCAPLUS				
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI)			(CA INDEX NAME)	



L20 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:42664 HCAPLUS

DOCUMENT NUMBER: 43:42664

ORIGINAL REFERENCE NO.: 43:7697c-d

TITLE: Azo dye

PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale

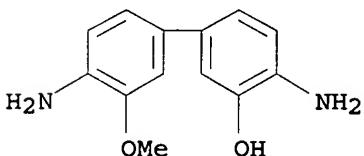
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	-----	-----	-----	-----
	CH 233846		19441201	CH	
AB	A new azo dye is obtained by combining diazotized 4-aminopyrocatechol ethylene ether with 4-MeC6H4OH. The new dye is a yellow powder which dissolves with a yellow color in org. solvents, such as alc., EtOAc, etc. When treated with a thinner, it forms a fine paste which gives a fine dispersion in water for dyeing rayon acetate fibers fast yellow tones.				
IT	87084-62-6, Phenol, 2-amino-5-(4-amino-3-methoxyphenyl)- (azo dyes from)				
RN	87084-62-6 HCAPLUS				
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino-3'-methoxy- (9CI) (CA INDEX NAME)				



L20 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:35490 HCAPLUS

DOCUMENT NUMBER: 43:35490

ORIGINAL REFERENCE NO.: 43:6424g-i

TITLE: Coupling reactions with diazotized dyes

PATENT ASSIGNEE(S): Ciba Ltd.

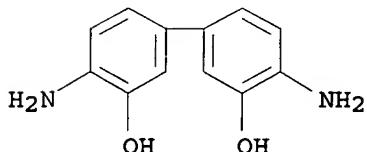
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 255413		19490117	CH	
AB	Diazo compds. of 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) are coupled with components, preferably naphthalene derivs. (II), free of sulfonic acid groups. Coupling is effected in position adjacent to an OH group in absence of complex-forming metal salts and in presence of aliphatic amines (III). Tetrazo products of I or diazo products of one mol. I, combined with one mol. of a coupling component are used. II are dihydroxy-, aminohydroxy-, or halogenated hydroxynaphthalenes. III are water-sol. aliphatic amines, contg. lower alkyls, or alkanolamines. In an example I is tetrazotized and coupled with 2,6-dihydroxynaphthalene in presence of H ₂ O and triethanolamine. The reaction's product dyes cellulosic fibers a navy shade fast to washing and light when aftertreated with Cu salts according to the one- or two-bath method.			
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)			
RN	2373-98-0 HCAPLUS			
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:30709 HCAPLUS

DOCUMENT NUMBER: 43:30709

ORIGINAL REFERENCE NO.: 43:5597b-c

TITLE: Azo dye

PATENT ASSIGNEE(S): Ciba Ltd.

DOCUMENT TYPE: Patent

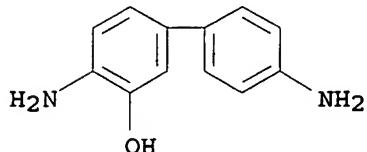
LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 242160		19460902	CH	
AB	A new azo dye capable of dyeing plant fibers wash- and lightfast red tones in a Cu-salt bath is prep'd. by coupling tetrazotized 3-hydroxy-4,4'-diaminobiphenyl first with salicylic acid and then with 1-(4-hydroxy-3-carboxyphenyl)-3-methyl-5-pyrazolone. The new dye is a dark powder,			

IT orange-brown in water and robin-red in concd. H₂SO₄.
 3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)-
 (azo dyes from)
 RN 3366-54-9 HCPLUS
 CN [1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 15 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:30708 HCPLUS

DOCUMENT NUMBER: 43:30708

ORIGINAL REFERENCE NO.: 43:5597a-b

TITLE: Azo dye

PATENT ASSIGNEE(S): J. R. Geigy A.-G.

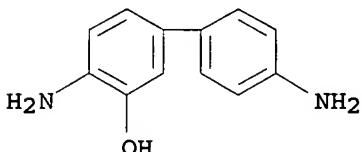
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 241207		19460701	CH	
AB	4-Nitro-4'-hydroxy-1,1'-azobenzene-3'-carboxylic acid-2-sulfonic acid is condensed with 4-aminodiphenylamine-2-sulfonic acid in alk. medium. The new azo dye gives reddish brown prints on cellulose fibers which are fast against soap, soda, Cl, and light.			
IT	3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)- (azo dyes from)			
RN	3366-54-9 HCPLUS			
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 16 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:28358 HCPLUS

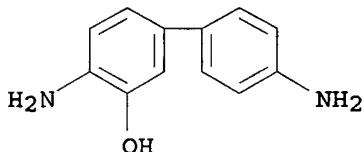
DOCUMENT NUMBER: 43:28358

ORIGINAL REFERENCE NO.: 43:5198f-g

TITLE: Metallizable azo dyes

PATENT ASSIGNEE(S) : Ciba Ltd.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

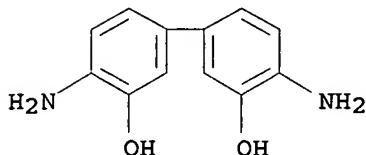
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 244512		19470401	CH	
AB	I is coupled with salicylic acid 1 and then with 1-(3-aminophenyl)-3-methyl-5-pyrazolone 1 mol.; the disazo dye is diazotized and coupled with III to give a red dye.			
IT	3366-54-9, Phenol, 2-amino-5-(p-aminophenyl)- (azo dyes from)			
RN	3366-54-9 HCPLUS			
CN	[1,1'-Biphenyl]-3-ol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 17 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1949:26315 HCPLUS
 DOCUMENT NUMBER: 43:26315
 ORIGINAL REFERENCE NO.: 43:4866c-f
 TITLE: Trisazo dyes
 PATENT ASSIGNEE(S) : Ciba Ltd.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

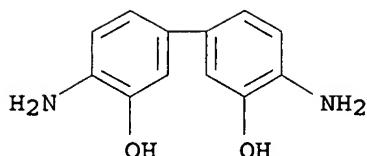
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 244770		19470516	CH	
AB	Gray boil-fast dyes for cellulose fibers are prep'd. To 2,6-dichloro-4-nitroaniline (I) 20.7, previously diazotized in nitrosylsulfuric acid, iced, and neutralized with MgO 30, is added a neutral soln. of 5-amino-2-naphthalenesulfonic acid (II) 22.3 parts. The coupling is completed with AcONa, filtered, resludged in water and Na2CO3, salted out, and filtered. This monoazo dye (III) is further diazotized and coupled again as above with II, rediazotized, and coupled in alk. medium with 6-anilino-1-naphthol-3-sulfonic acid (IV) to give the desired trisazo dye.			
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)			

RN 2373-98-0 HCPLUS
 CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 18 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1949:23934 HCPLUS
 DOCUMENT NUMBER: 43:23934
 ORIGINAL REFERENCE NO.: 43:4476b-d
 TITLE: Disazo dyes
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

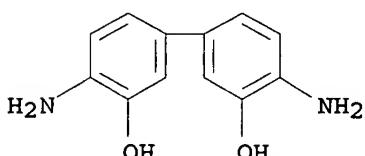
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 609302		19480929	GB	
AB	Disazo dyes (I) for coloring cellulose and animal fibers are prep'd. by coupling, in an alk. medium, tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (I) with 2 mols. of the same or different components, at least one of which is 1-hydroxynaphthalenesulfonic acid (II) contg. an auxochromic group in the 8-position. I may be converted into complex metal compds. in the dyebath or in the fiber. Coupling compds. were 1-amino-8-hydroxy-4-naphthalenesulfonic acid, 1-amino-8-hydroxy-2,4-naphthalenedisulfonic acid (II), 1-amino-8-hydroxy-4,6-naphthalenedisulfonic acid (III), 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid (IV), 1-tolylsulfonamido-8-hydroxy-4-naphthalenesulfonic acid, and 1-anilino-8-hydroxy-4-naphthalenesulfonic acid. In the case of II, III, and IV, copper sulfate was added during the coupling process and a Cu compd. separated. BaO, Mg(OH)2, Ca(OH)2, and KOH solns. were used during coupling.			
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)			
RN	2373-98-0 HCPLUS			
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 19 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1949:23930 HCPLUS
 DOCUMENT NUMBER: 43:23930
 ORIGINAL REFERENCE NO.: 43:4475g-i,4476a
 TITLE: Monoazo dyes
 PATENT ASSIGNEE(S): Sandoz Ltd.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 232049	19440717	CH		
AB	<p>A monoazo dye (I) is prep'd. when 4-amino-o-cresotic acid (II) 16.7 suspended in H₂O 80 and 30% HCl 17.5 is diazotized at 0-2° with NaNO₂ 6.9 in the usual way, and Na 2-naphthol-4-sulfonate 24.6 parts is added to the suspension of the diazo compd. so obtained. Coupling takes place with gradual neutralization of the acid reaction and with addnl. stirring until the diazo compd. disappears. I ppts. as brown needles and gives pronounced brown shades on wool, as well as in chrome-printing on cellulose fibers, of good Cl- and wash-resistance. Likewise, in Swiss 232,050, the use of 4-amino-6-sulfosalicylic acid 23.3 parts for II yields a I which gives orange-brown shades on wool upon afterchroming and, in calico printing, gives quickly fixed, somewhat red-tinged brown impressions of good Cl- and wash-resistance. Likewise, in Swiss 232,051, the use of 4-amino-6-chlorosalicylic acid 18.8 parts for II yields a I which gives brown shades on wool upon afterchroming and quickly fixed, pronounced chrome printings of good Cl- and wash-resistance.</p>			
IT	2373-98-0, m,m'-Biphenol, 6,6'-diamino- (dyes from)			
RN	2373-98-0 HCPLUS			
CN	[1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)			



L20 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1948:1791 HCAPLUS
 DOCUMENT NUMBER: 42:1791
 ORIGINAL REFERENCE NO.: 42:377i,378a-f
 TITLE: Tris and higher polyazo dyes from
 3,3'-dihydroxybenzidine
 INVENTOR(S): Straub, Fritz; Brassel, Jakob; Pieth, Peter
 PATENT ASSIGNEE(S): Soc. pour l'ind. Chim. a Bale
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

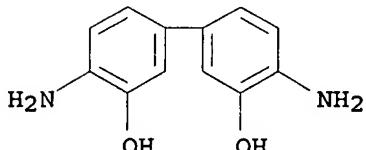
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2428130		19470930	US	
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GI For diagram(s), see printed CA Issue.

AB Substantive dyes capable of being metalized in the bath or on the fiber are prep'd. by coupling tetrazotized 3,3'-dihydroxybenzidine (I) with various coupling compds., one or both couplers being an azo dye capable of coupling. For example (A) is prep'd. by coupling I with 2 mols. di-Na 5,5'-dihydroxy-2,2'-dinaphthylamine-7,7'-disulfonate (II) which then is coupled with 2 mols. diazotized 4-hydroxy-3-aminobenzenesulfonamide (III). The tetrakisazo dye is a greyish black powder, forming in water violet, in 10% soda reddish blue, in 10% NaOH reddish violet, and in concd. H₂SO₄ blue solns., and dyeing cotton blue shades after coppering. Similar dyes are obtained by replacing III with 2-hydroxy-4-chloroaniline, 1-hydroxy-2-amino-4,6-dinitrobenzene, 2-amino-4-nitrobenzoic acid, or 5-nitro-2-aminophenol (IV). Acid coupled diazotized 5-amino-2-hydroxybenzoic acid and 2-methoxy-5-methylaniline further diazotized and coupled with A dyes cotton fast blue shades by aftercoppering. By replacing II with 6,6'-ureylene-bis[1-naphthol-3-sulfonic acid] and coupling with III a dye yielding violet shades after coppering is produced. I coupled with 1 mol. 1-phenyl-3-methyl-5-pyrazolone and 1 mol. resorcinol (V), then coupled with 1 mol. diazotized 5-nitro-2-aminobenzenesulfonic acid dyes cotton brownish Bordeaux shades after coppering. I coupled with 2 mols. 1-(5-hydroxy-7-sulfo-2-naphthyl)-3-methyl-5-pyrazolone in the pyrazolone ring and coupled with 2 mols. diazotized anthranilic acid dyes cotton similar shades. I coupled with 2 mols. V then coupled with 2 mols. diazotized p-chloroaniline dyes fast violet shades after coppering. One mol. of the compd. (VI) prep'd. by coupling I with 1 mol. V is coupled with 2 mols. of the disazo-azo compd. from I and salicylic acid to yield a hexakisazo dye. The greyish black powder forms in water yellow brown, in 10% soda brown, in 10% NaOH reddish brown, and in concd. H₂SO₄ violet solns. It dyes cotton after coppering in brown shades. Two mols. of the monoazo dye prep'd. by coupling diazotized IV with 1 mol. V is coupled with I. The greyish black powder forms in water brownish red, in 10% soda violet brown, and in concd. H₂SO₄ reddish violet solns. It dyes cotton

IT brownish violet shades after coppering.
 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
 (dyes from)
 RN 2373-98-0 HCAPLUS
 CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1948:1788 HCAPLUS
 DOCUMENT NUMBER: 42:1788
 ORIGINAL REFERENCE NO.: 42:376e-i,377a-b
 TITLE: Disazo dyes from dihydroxybenzidines
 INVENTOR(S): Straub, Fritz
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2426977	19470909	US		

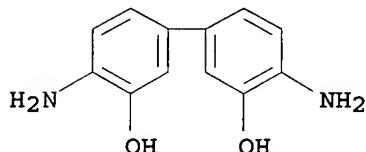
AB Dyes suitable for dyeing diverse materials and which can be metallized in substance, in the bath, or on the fiber, are prep'd. by coupling tetrazotized 3,3'-dihydroxybenzidine (I) with 2 mols. of like or unlike aminonaphtholsulfonic acid coupling components. The use of alkali or alk. earth hydroxides or NH4OH makes coupling easier. For example, 10.8 parts I are tetrazotized, the crystd. tetrazoxide (II) is filtered, and is coupled with 12 parts 1,8-naphthalenediol-4-sulfonic acid (III) in H2O with 20 parts Ca(OH)2 in 1 hr. at 10-15°. Then 15.8 parts 6-anilino-1-naphthol-3-sulfonic acid (IV) are coupled thereto with 9 parts Ca(OH)2 1 hr. After sepn. and drying the dye is a dark green bronzy powder sol. in H2O and dil. caustic alkali to give reddish blue, in dil. soda cornflower blue, and in concd. H2SO4 greenish blue solns. It yields after coppering, pure blue shades on vegetable fibers of good fastness to washing and light. By replacing III with 6-(4-hydroxy-3-carboxyanilino)-1-naphthol-3-sulfonic acid (V) a similar dyeing is obtained. The dye from II coupled with 2 mols. V yields on cotton, upon aftertreating with Cu, pure blue shades fast to washing and light. II coupled with 6-(2-hydroxyethylamino)-1-naphthol-3-sulfonic acid yields a black bronzy powder dyeing cotton with aftercoppering by a 1 or 2 bath process pure blue shades of good fastness. Other dyes prep'd. are: II with 6,6'-iminobis[1-naphthol-3-sulfonic

acid], black bronzy powder forming in water violet, in dil. soda blue, in caustic alkali blue violet, and in concd. H₂SO₄ greenish blue solns. It **dyes** cotton fast blue shades after coppering. II with 8-anilino-1-naphthol-5-sulfonic acid is a black powder forming in water blue, in dil. soda greenish blue, in caustic alkali reddish blue, and in concd. H₂SO₄ greenish blue solns. It **dyes** cotton aftertreated with Cu green-blue shades. II with 8-(tolylsulfonylamino)-1-naphthol-5-sulfonic acid is a bronzy black powder forming in water blue, in caustic alkali reddish blue, in dil. soda blue, and in concd. H₂SO₄ green solns. Aftertreated with Cu on cotton it gives green shades. II with 2 mols. IV yields a dark **colored** powder forming in water violet, in caustic alkali and concd. H₂SO₄ blue solns. It **dyes** cotton and regenerated cellulose blue shades improved in fastness to washing and light by Cu. II coupled with 8-amino-1-naphthol-3,6-disulfonic acid (VI) acetylated with Ac₂O and converted in substance to the Cu compd. is a greyish black powder yielding pure blue shades on cotton. A similar compd. is prep'd. by coupling II with the N-Ac deriv. of VI.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(**dyes** from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1948:1787 HCAPLUS
 DOCUMENT NUMBER: 42:1787
 ORIGINAL REFERENCE NO.: 42:376c-e
 TITLE: Metallizable disazo **dyes** from
 tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl
 Straub, Fritz; Brassel, Jakob; Pieth, Peter
 INVENTOR(S):
 PATENT ASSIGNEE(S): Soc. pour l'ind. chim. a Bale
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2427537 19470916 US

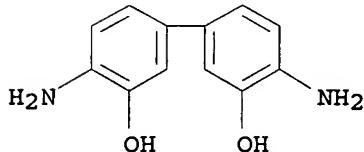
AB Metalizable disazo **dyes** (I) are prep'd. by coupling tetrazotized 3,3'-dihydroxy-4,4'-diaminobiphenyl (II) with 2 mols. of coupling components, at least 1 of which is a 1-naphthol contg. an auxochrome group in the 8-position. I are esp. suited for dyeing cellulose and other vegetable **fibers**, and

also for dyeing wool, silk, and leather, and they are metalizable with salts of Cu, Co, Ni, Fe, Cr, V, and Mn. I dye in blue to black shades. I are prep'd. from tetrazotized II and 2,6-naphthalenediol, 1,5-naphthalenediol, 2,7-naphthalenediol, 8-amino-2-naphthol, 7-amino-2-naphthol, 6-amino-2-naphthol, 2,6-naphthalenediol monoglyceryl ether, or 1-naphthol-8-sulfonamide.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)

RN 2373-98-0 HCAPLUS

CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1948:1786 HCAPLUS

DOCUMENT NUMBER: 42:1786

ORIGINAL REFERENCE NO.: 42:375i,376a-c

TITLE: Insoluble sulfonyl fluoride disazo dyes

INVENTOR(S): Parker, Robert P.; Hofmann, Corris M.

PATENT ASSIGNEE(S): American Cyanamid Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

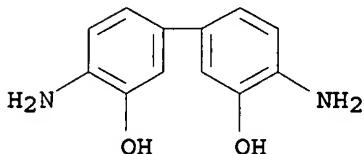
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2427995 19470923 US

AB Water-insol. disazo dyes showing good wash fastness are prep'd. and have the general formula: ArN:NAr'N:NX, in which X is an ice color coupler, Ar is a benzene residue, and Ar' is a benzene or naphthalene residue. The residues are free from solubilizing groups, and at least one of them contains a SO2F group. The SO2F group causes a general lightening and brightening of the shade. For example, diazotized 3-amino-4-methylbenzenesulfonyl fluoride (I) coupled with 1-naphthylamine yields 3-(4-amino-1-naphthylazo)-4-methylbenzenesulfonyl fluoride (II), m. 197-200° (from dil. EtOH). Diazotized II printing paste coupled on the fiber with N-phenyl-3-hydroxy-2-naphthamide (III) gives a bluish gray pattern. I coupled with o-phenetidine and diazotized and coupled with III dyes cotton a deep maroon. Diazotized 3-aminobenzenesulfonyl fluoride coupled with 2,5-dimethoxyaniline (IV) and diazotized and coupled with III prints a strong blue of bright reddish shade. IV with N-1-naphthyl-3-hydroxy-2-naphthamide (V) dyes a strong blue of high brilliance. IV with N-(o-ethoxyphenyl)-3-hydroxy-2-naphthamide

gives bluer dyeings. IV with the 2-naphthyl isomer of V gives royal blue; with N-o-tolyl-2-hydroxy-3-carbazolecarboxamide purple; with N,N'-bis(acetylacetyl)-o-tolidine, scarlet; with N-(4-chloro-o-tolyl)-3-hydroxy-2-naphthamide, greenish blue. Diazotized 2-chloro-4-nitroaniline with I, diazotized and coupled with III, gives a red pigment.

IT 2373-98-0, m,m'-Biphenol, 6,6'-diamino-
(dyes from)
RN 2373-98-0 HCAPLUS
CN [1,1'-Biphenyl]-3,3'-diol, 4,4'-diamino- (9CI) (CA INDEX NAME)



L20 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1947:26652 HCAPLUS

DOCUMENT NUMBER: 41:26652

ORIGINAL REFERENCE NO.: 41:5316a-d

TITLE: Anthraquinone dyes

PATENT ASSIGNEE(S): Sandoz Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 580351 19440705 GB

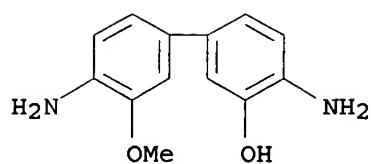
GI For diagram(s), see printed CA Issue.

AB Anthraquinone dyes (I) of the general formula are described in which one X is a SO₃H group, the other X is H, and R is H or Me. I are prep'd. by the reaction of a salt of 1-amino-4-bromo-2,7(or 2,6)-anthraquinonedisulfonic acid with monoacylaminoanilines (II). I may also be prep'd. by the reaction of a salt of 1-amino-2,4-dibromo-6(or 7)-anthraquinonesulfonic acid with II, followed by treatment with K₂SO₃ soln. The salts of 1-amino-4-[x-(acylamino)anilino]-2,6(or 2, 7)-anthraquinonedisulfonic acid dye wool, silk, and synthetic fibers (nylon) greenish blue shades. Cf. following abstr.

IT 87084-62-6, Phenol, 2-amino-5-(4-amino-3-methoxyphenyl)-
(azo dyes from)

RN 87084-62-6 HCAPLUS

CN [1,1'-Biphenyl]-3-ol, 4,4'-diamino-3'-methoxy- (9CI) (CA INDEX NAME)



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